

REMARKS

Claims 1-3 and 6-11 are pending in the present application.

PRIOR ART REJECTIONS

A. Claims 1, 2, 6, 7 and 10

Claims 1, 2, 6, 7 and 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,421,462 (Christian). This rejection is traversed.

Regarding claim 1, the Examiner asserts that Christian discloses all of the claim elements including taking a first image including only a background when a predetermined period of time is measured by a time measuring portion and taking a second image including a background and an object when a second period of time is measured by a time measuring portion. The Examiner then asserts that Christian teaches this feature in column 8, lines 9-14 and 55-67 and column 9, lines 11-20 and 59-64. This section of Christian teaches to update the background image every time a new source image is captured, such as every 5 seconds.

Christian is directed to track a person through a succession of video images. The Examiner seems to believe that the taking of video images every 1/30 second to form a sequence 35 of frames 34 (see Fig. 2 and column 8, lines 11-14) meets the features of claim 1 of taking an single image after a first

predetermined time. The present invention device of taking a single frame image is substantially different than the device of Christian that deals with video images.

In Christian, there is no teaching or suggestion to take a single image at a first predetermined time after a shutter button is manually pressed. Rather, as shown in Fig. 2 of Christian, the images taken include a video sequence of ordered frames 35 comprising a plurality of frames 34 that can be produced at a rate of 30 frames per second (see Fig. 2 and column 8, lines 11-14). The video sequence of ordered frames 35 is input to the image processing system 16 (see Fig. 1 and column 8, lines 22-24). The Examiner also relies on column 8, lines 55-67 of Christian. This section of Christian discloses that when a prescribed period of time elapses, a background image is updated with an image obtained by averaging a plurality of source images (e.g., the last ten captured source images). In Christian, this technique is referred to as "time-averaged background image updating scheme or scenario." Christian is silent with respect to the claimed scheme in which a background image is updated when only a single source image is taken.

Also, in the present invention, after a first period of time elapses and before the second period of time elapses, there is a period of time without shooting an image. This feature is not taught or suggested by Christian, which deals with shooting a video, as presented above.

In addition, Applicant submits that it would not have been obvious to modify Christian to include a manually pressed shutter button and to output only a single image at a first predetermined time because there is no motivation to do so. As presented above, Christian is directed to track a person through a succession of video images (see column 8, lines 37-40). As shown in Fig. 2, the image takes the form of a video sequence of ordered frames 35 comprising a plurality of frames 34 that can be produced at a rate of 30 frames per second (see Fig. 2 and column 8, lines 11-14). The video sequence of ordered frames 35 is input to the image processing system 16 (see Fig. 1 and column 8, lines 22-24). Therefore, there is no use for taking single image after a first predetermined time after a shutter button is pressed manually in the device of Christian. That is, Christian is directed to a completely different device than that of the present invention, in which a single image is used. There is no teaching or suggestion in Christian to output only a single image at a first predetermined time, and in fact this would amount to a significant alteration of Christian. Thus, such a modification of Christian would be the result of hindsight gleamed from the present invention, which is not allowed. Accordingly, the present invention would not have been obvious over Christian.

B. Claims 8 and 9

Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Christian in view of U.S. Patent 5,267,333 (Aono). This rejection is traversed.

Aono fails to make up for the above-noted deficiencies of Christian. Therefore, because the combination of Christian and Aono does not form the invention defined by claims 8 and 9, the rejection of claims 8 and 9 under 35 U.S.C. § 103(a) is improper and should be withdrawn.

C. Claim 3

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Christian in view of U.S. Patent 5,914,748 (Parulski). This rejection is traversed.

Parulski fails to make up for the above-noted deficiencies of Christian. Therefore, because the combination of Christian and Parulski does not form the invention defined by claim 3, the rejection of claim 3 under 35 U.S.C. § 103(a) is improper and should be withdrawn.

Also, claim 3 would not have been obvious over Christian in view of Parulski because Parulski explicitly teaches away from this modification (see MPEP § 2145 X.D.2.). Parulski explicitly teaches to keep the background the same for the first and second images. Specifically, at column 3, lines 8 - 19, Parulski teaches:

The algorithm works best when the camera focus and exposure setting for the second exposure **are the same** as for the first exposure. This condition **minimizes the difference of the image**

background between the two exposures. Although it is possible to have a different exposure setting for the second exposure and compensate for it, knowing the camera and system calibration, **the procedure is simplified by keeping the exposure setting for the second exposure the same as the first**. If the camera focus or exposure setting is not maintained, the change needs to be compensated before applying the following processing. (Emphasis added).

Therefore, because Parulski teaches away from the combination asserted by the Examiner, such a combination would not been obvious. Thus, the rejection of claim 3 under 35 U.S.C. § 103(a) is improper and should be withdrawn.

D. New Claim 11

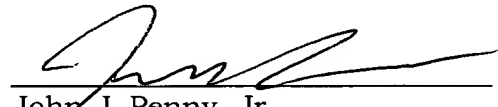
Applicant submits that new claim 11 is patentable over the applied prior art for at least the reasons presented above with respect to claim 1.

Based on the foregoing, Applicant submits that the present application is in condition for allowance and allowance is respectfully solicited. If the Examiner believes that any of the outstanding issues could be resolved by a telephone conference, Applicant respectfully requests the Examiner to contact the undersigned at the telephone number listed below.

Applicant believes that no additional fees are due for the subject application. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. 04-1105.

Respectfully Submitted,

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Customer No.: 21874


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